AMENDMENTS TO THE CLAIMS

This Listing of the Claims will replace all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently Amended) A compound of the formula:

wherein:

X is -O, $-CH_2$, $-CH(C_{1-4} \text{ alkyl})$, $-CH(C_{3-6} \text{ cycloalkyl})$, -S, [[--]]arylene, or [[--]]arylalkylene;

R is —H, [[—]]C₁₋₄ alkyl optionally containing one or more heteroatoms selected from O, S₂ or N in the chain, [[—]]C₃₋₆ cycloalkyl optionally containing one or more heteroatoms selected from O, S₂ or N in the ring, [[—]]aryl, arylalkyl, or heterocycle;

Y is -H, $[[-]]C_{1-4}$ alkyl, or $[[-]]C_{3-6}$ cycloalkyl;

Z is $[[-]]C_{1-4}$ alkyl[[,]] or $[[-]]C_{3-6}$ cycloalkyl;

 R_1 , R_2 , R_3 , R_4 , and R_5 are each independently [[is]] —H, [[—]] C_{1-4} alkyl, halogen, —NO₂, —OW (wherein W is H, CH₃, aryl), or —SW, [[()]wherein W is —H, —CH₃, or [[—]]aryl[[()]];

R₂ is -H, -C₁₋₄ alkyl, halogen, -NO₂, -OW (wherein W is -H, -CH₃, -aryl), -SW (wherein W is -H, -CH₃, -aryl);

R₃-is-H, C₁₋₄-alkyl, halogen, NO₂, OW (wherein W is-H, CH₃, aryl), SW (wherein W is-H, -CH₃, -aryl);

R₄-is-H, -C₁₋₄ alkyl, -halogen, -NO₂, -OW (wherein W is-H, CH₃, aryl), -SW (wherein W is-H, CH₃, aryl);

R₅ is H, C₁₋₄ alkyl, halogen, NO₂, OW (wherein W is H, CH₃, aryl), SW (wherein W is H, CH₃, aryl); and

 R_1 and R_2 are optionally CH=CH-CH=CH; or a pharmaceutically acceptable salt thereof.

- 2. (Canceled).
- 3. (Currently Amended) [[A]] <u>The</u> compound <u>of having formula A as claimed in</u> claim 1, wherein

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R_5 = CI;
X = S
                    Z = CH_3
                               R = iPr
                                           R_1 = CI
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
        Y = H
        Y = H
                                           R_1 = CI
                                                                                   R_5 = CI;
X = S
                    Z = CH_3
                               R = Pen
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
X = S
                    Z = Et
                               R = iBu
                                           R_1 = C1
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = CI;
        Y = H
        Y = H
X = S
                    Z = Et
                               R = iPen
                                           R_1 = C1
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = CI;
                                                                                   R_5 = F;
X = S
                    Z = CH_3
                               R = iPr
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
        Y = H
X = S
        Y = H
                    Z = CH_3
                               R = iBu
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
X = S
                    Z = CH_3
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
        Y = H
                               R = nBu
X = S
                    Z = CH_3
                               R = sBu
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
        Y = H
                                                     R_2 = H
                                                                         R_4 = H
X = S
                    Z = CH_3
                               R = cPen
                                           R_1 = F
                                                               R_3 = H
                                                                                   R_5 = F;
        Y = H
                                                     R_2 = H
                                                                         R_4 = H
X = S
        Y = H
                    Z = CH_3
                               R = cEs
                                           R_1 = F
                                                               R_3 = H
                                                                                   R_5 = F;
                               R = iPr
                                                                         R_4 = H
                                                                                   R_5 = F;
X = S
        Y = H
                    Z = Et
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                    Z = Et
X = S
        Y = H
                               R = cPen
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
X = S
        Y = CH_3
                    Z = CH_3
                               R = CH_3
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
X = S
        Y = CH_3
                    Z = CH_3
                               R = CH_3
                                           R_1 = F
                                                                                   R_5 = F;
X = S
        Y = CH_3
                    Z = CH_3
                               R = sBu
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
X = S
                    Z = CH_3
                               R = cPe
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
        Y = CH_3
X = S
        Y = CH_3
                    Z = CH_3
                               R = iPr
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F;
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F; or
X = S
        Y = CH_3
                    Z = CH_3
                               R = nBu
                                           R_1 = F
X = S
        Y = CH_3
                    Z = CH_3
                               R = iBu
                                           R_1 = F
                                                     R_2 = H
                                                               R_3 = H
                                                                         R_4 = H
                                                                                   R_5 = F.
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- 4. (Canceled).
- 5. (Currently Amended) A pharmaceutically acceptable salt of [[a]] the compound of claim 1.
- 6. (Currently Amended) A process for the preparation of a compound of-having formula A as claimed in claim 1, wherein X = O, comprising the steps of reacting a wherein the proper methyl arylacetylalkylacetate is reacted with O-methylisourea in presence of calcium hydroxide to generate a 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil; and reacting the 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil the so obtained 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil

alkyl) 6 benzyl(substituted)uracils are reacted with a the proper potassium alkoxide according to scheme A.

- 7. (Currently Amended) A process for the preparation of a compound of having formula A as claimed in claim 1, wherein X = S, comprising the steps of reacting a wherein the proper methyl arylacetylalkylacetate is reacted with O-methylisourea in presence of calcium hydroxide to generate a 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil; and reacting the 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil the so obtained 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracils are reacted with a the proper potassium alkoxide according to scheme B.
 - 8. (Canceled).
- 9. (Currently Amended) A method of treating infection by HIV or of treating AIDS, comprising administering to a mammal an effective amount of a compound of as elaimed in claim 1 or a pharmaceutically acceptable salt thereof.
 - 10. (Canceled).
- 11. (Currently Amended) A pharmaceutical composition comprising a compound of as claimed in claim 1 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
- 12. (Currently Amended) A method of treating infection by HIV or of treating AIDS, comprising administering to a mammal an effective amount of a compound of as elaimed in claim 1 or a pharmaceutically acceptable salt thereof, in combination with another anti-HIV agent selected from the group consisting of abacavir, zidovudine, BILA 1906, BILA 2185, BM+51.0836: triazoloisoindolinone derivative, BMS 186,318: aminodiol derivative HIV-1 protease inhibitor, d4API, stavudine, efavirenz, HBY097, HEPT, KNI-272, L697,593, L-735,524, L-697,661, L-FDDC, L-FDOC, nevirapine, foscarnet, PMEA, PMPA, Ro 31-8959, RPI-3121, SC-52151, SC-55389A, TIBO R82150, TIBO 82913, TSAO-m3T, U90152, UC[[:]] thiocarboxanilide derivatives[[,]] such as UC-781[[,]] and UC-82, VB 11,328, amprenavir, XM 323, delaviridine, famciclovir, gancyclovir, penciclovir, indinavir, nelfinavir, ritonavir, saquinavir, DDI, DDC, [[D]]delaviridine, β-LddA, β-L-3'-azido-d5FC, carbovir, acyclovir, interferon, stavudine, [[(]]3'-azido-2',3'-dideoxy-5-methyl-cytidine[[)]],

Appl. No. 10/689,982 Amdt. dated August 21, 2007 Reply to Office Action of June 1, 2007

3'-azido nucleosides, β -D-dioxolane nucleosides such as β -D-dioxolanylguanine (DXG), β -D-dioxolanyl-2,6-diaminopurine (DAPD), and β -D-dioxolanyl-6-chloropurine (ACP), D4T, FTC, 3TC, AZDU, and amprenavir.

13. (Currently Amended) A compound of the formula:

$$R$$
 R_{4}
 R_{2}
 R_{3}
 R_{4}
 R_{2}
 R_{3}
 R_{4}
 R_{2}

wherein:

X is -O, $-CH_2$, $-CH(C_{1-4} \text{ alkyl})$, $-CH(C_{3-6} \text{ cycloalkyl})$, -S, [[-]]arylene, or [[-]]arylalkylene;

R is —H, [[-]] C_{1-4} alkyl optionally containing one or more heteroatoms selected from O, S or N in the chain, [[-]] C_{3-6} cycloalkyl optionally containing one or more heteroatoms selected from O, S or N in the ring, [[-]]aryl, arylalkyl, or heterocycle

Y is -H, $[[-]]C_{1-4}$ alkyl, or $[[-]]C_{3-6}$ cycloalkyl;

Z is —H, $[[-]]C_{1-4}$ alkyl, or $[[-]]C_{3-6}$ cycloalkyl;

 R_1 is [[-]] C_{1-4} alkyl, halogen, —NO₂, —OW (wherein W is H, CH₃, aryl), or —SW, [[(]]wherein W is —H, —CH₃, or [[-]]aryl[[)];

R₂, R₃, R₄, and R₅ are each independently [[is]] —H, [[—]]C₁₋₄ alkyl, halogen, —NO₂, —OW (wherein W is —H, —CH₃, aryl), or —SW, [[(]]wherein W is —H, —CH₃, or [[—]]aryl[[)]];

R₃ is -H, -C₁₋₄ alkyl, halogen, NO₂, OW (wherein W is -H, -CH₃, aryl), SW (wherein W is -H, -CH₂, aryl);

R₄ is H, C_{1.4} alkyl, halogen, NO₂, OW (wherein W is H, CH₃, aryl), SW (wherein W is H, CH₃, aryl);

R₅-is-H, C₁₋₄-alkyl, -halogen, NO₂, OW (wherein W is H, CH₃, aryl), SW (wherein W is H, CH₂, aryl); and

R₁ and R₂ are optionally CH=CH-CH=CH; or a pharmaceutically acceptable salt thereof.

14. (Currently Amended) A compound of having formula B as claimed in claim 13, wherein

$$X = O Y = H Z = H R = sBu R_1 = F R_2 = H R_3 = H R_4 = H R_5 = F; or$$

 $X = O Y = H Z = H R = cPen R_1 = F R_2 = H R_3 = H R_4 = H R_5 = F.$

15. (Currently Amended) A compound of having formula B as claimed in claim 13, wherein

```
R_4 = H
                                                                                             R_5 = H;
X = S
         Y = H
                      Z = H
                               R = sBu
                                              R_1 = NO_2
                                                             R_2 = H
                                                                        R_3 = H
X = S
         Y = H
                      Z = H
                               R = sBu
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = H;
X = S
                                              R_1 = C1
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = C1;
         Y = H
                      Z = H
                               R = CH_3
                               R = iPr
                                              R_1 = C1
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = C1;
X = S
         Y = H
                      Z = H
                                              R_1 = C1
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = C1;
X = S
         Y = H
                      Z = H
                               R = nBu
                                                             R_2 = H
         Y = H
X = S
                      Z = H
                               R = iBu
                                              R_1 = C1
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = C1;
X = S
                               R = sBu
                                              R_1 = C1
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = C1;
         Y = H
                      Z = H
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = Cl;
X = S
         Y = H
                      Z = H
                               R = cPen
                                              R_1 = C1
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
X = S
         Y = H
                      Z = H
                               R = CH_3
X = S
         Y = H
                      Z = H
                               R = iPr
                                              R_1 = F
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
                                                                        R_3 = H
                                                                                  R_4 = H
X = S
         Y = H
                      Z = H
                               R = nBu
                                              R_1 = F
                                                             R_2 = H
                                                                                             R_5 = F;
X = S
         Y = H
                      Z = H
                               R = iBu
                                              R_1 = F
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
X = S
         Y = H
                      Z = H
                               R = sBu
                                              R_1 = F
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
X = S
         Y = H
                      Z = H
                               R = cPen
X = S
         Y = CH_3
                      Z = H
                               R = sBu
                                              R_1 = C1
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = H;
X = S
         Y = CH_3
                      Z = H
                               R = sBu
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = H;
X = S
         Y = CH_3
                      Z = H
                               R = sBu
                                              R_1 = C1
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = C1;
                                                                                  R_4 = H
X = S
         Y = CH_3
                      Z = H
                               R = CH_3
                                              R_1 = F
                                                             R_2 = H
                                                                       R_3 = H
                                                                                             R_5 = F;
X = S
         Y = CH_3
                      Z = H
                               R = iPr
                                              R_1 = F
                                                             R_2 = H
                                                                       R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
                      Z = H
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
X = S
         Y = CH_3
                               R = nBu
X = S
         Y = CH_3
                      Z = H
                               R = iBu
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
                                                                                  R_4 = H
X = S
         Y = CH_3
                      Z = H
                               R = sBu
                                              R_1 = F
                                                             R_2 = H
                                                                       R_3 = H
                                                                                             R_5 = F;
                                                                                  R_4 = H
X = S
         Y = CH_3
                      Z = H
                               R = cPen
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                             R_5 = F;
X = S
         Y = iPr
                      Z = H
                               R = iPr
                                              R_1 = F
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F;
X = S
         Y = H
                      Z = H
                               R = MeSMe R_1 = [[R]]\underline{F}
                                                             R_2 = H
                                                                                  R_4 = H
X = S
         Y = CH_3
                      Z = H
                               R = MeSMe R_1 = [[R]]\underline{F}
                                                             R_2 = H
                                                                        R_3 = H
                                                                                             R_5 = F;
X = S
         Y = Et
                      Z = H
                               R = MeSMe
                                              R_1 = [[R]]\underline{F}
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F; or
X = S
         Y = iPr
                      Z = H
                               R = MeSMe
                                              R_1 = [[R]]\underline{F}
                                                             R_2 = H
                                                                        R_3 = H
                                                                                  R_4 = H
                                                                                             R_5 = F.
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- 16. (Previously Presented) A pharmaceutically acceptable salt of a compound of claim 13.
- 17. (Currently Amended) A process for the preparation of a compound of having formula B as claimed in claim 13, wherein X = O, comprising the steps of reacting a wherein the proper methyl arylacetylalkylacetate is reacted with O-methylisourea in presence of calcium hydroxide to generate a 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil; and reacting the so obtained 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil[[s]] are reacted with a the proper potassium alkoxide according to scheme A.
- 18. (Currently Amended) A process for the preparation of a compound of having formula B as claimed in claim 13, wherein X = S, comprising the steps of reacting a wherein the proper methyl arylacetylalkylacetate is reacted with O-methylisourea in presence of calcium hydroxide to generate a 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil; and reacting the so obtained 2-O-methyl(5-alkyl)-6-benzyl(substituted)uracil[[s]] are reacted with a the proper potassium alkoxide according to scheme B.
- 19. (Currently Amended) A method of treating infection by HIV[[,]] or of treating AIDS, comprising administering to a mammal an effective amount of a compound of as claimed in claim 13 or a pharmaceutically acceptable salt thereof.
- 20. (Currently Amended) A pharmaceutical composition comprising a compound of as elaimed in claim 13 or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier.
- 21. (Currently Amended) A method of treating infection by HIV or of treating AIDS, comprising administering to a mammal an effective amount of a compound of as elaimed in claim 13 or a pharmaceutically acceptable salt thereof, in combination with another anti-HIV agent selected from the group consisting of abacavir, zidovudine, BILA 1906, BILA 2185, BM+51.0836: triazoloisoindolinone derivative, BMS 186,318: aminodiol derivative HIV-1 protease inhibitor, d4API, stavudine, efavirenz, HBY097, HEPT, KNI-272, L697,593, L-735,524, L-697,661, L-FDDC, L-FDOC, nevirapine, foscarnet, PMEA, PMPA, Ro 31-8959, RPI-3121, SC-52151, SC-55389A, TIBO R82150, TIBO 82913, TSAO-m3T, U90152, UC[[:]] thiocarboxanilide derivatives[[,]] such as UC-781[[,]] or UC-82, VB 11,328, amprenavir, XM 323, delaviridine, famciclovir, gancyclovir, penciclovir, indinavir,

nelfinavir, ritonavir, saquinavir, DDI, DDC, Delaviridine, β -LddA, β -L-3'-azido-d5FC, carbovir, acyclovir, interferon, stavudine, [[(]]3'-azido-2',3'-dideoxy-5-methyl-cytidine[[)]], 3'-azido nucleosides, β -D-dioxolane nucleosides such as β -D-dioxolanylguanine (DXG), β -D-dioxolanyl-2,6-diaminopurine (DAPD), and β -D-dioxolanyl-6-chloropurine (ACP), D4T, FTC, 3TC, AZDU, and amprenavir.

- 22. (New) The compound of claim 1, wherein R_1 is halo.
- 23. (New) The compound of claim 1, wherein R_5 is halo.
- 24. (New) The compound of claim 1, wherein R_1 and R_5 are independently halo.
- 25. (New) The compound of claim 1, wherein R_1 and R_5 are independently fluoro or chloro.
 - 26. (New) The compound of claim 13, wherein R_1 is halo.
 - 27. (New) The compound of claim 13, wherein R_5 is halo.
 - 28. (New) The compound of claim 13, wherein R_1 and R_5 are independently halo.
- 29. (New) The compound of claim 13, wherein R_1 and R_5 are independently fluoro or chloro.